

# AVIATION

FEBRUARY 5, 1923

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The Paris Salon: the Caudron stand, in the foreground; an Astra airship car in the background

VOLUME  
XIV

## SPECIAL FEATURES

Number  
6

NEW AIRCRAFT AT PARIS EXPOSITION  
SKYWRITING FOR ADVERTISING PURPOSES  
CURTISS ORIOLE FOR AERIAL PHOTOGRAPHY  
NEW JAPANESE CIVIL AND MILITARY AIRCRAFT

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*Member of the Manufacturers Aircraft Association*



FEBRUARY 5, 1923

# AVIATION

VOL. XIV, NO. 6

*Member of the United Bureau of Circulation*

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**NEW YORK**



## All in the Day's News

If you look at the flying news in the papers for the past year you will be struck by a significant fact.

A high proportion of the most meritorious performances in the air are noted in the press to be those of Glenn L. Martin machines.

This is not to be wondered at when it is realized that since men first flew, and until 1916, army officers spent more hours in the air in Martin planes than in all other makes combined—and without a single serious accident.

Furthermore, army and navy

records to 1923 show that in all the thousands and thousands of miles flown by Glenn L. Martin planes only two accidents have occurred in which officers were killed—one being due to a plane caught in a storm in the mountains and the other to another plane colliding with a Bomber.

The records established by Glenn L. Martin airplanes for stability, endurance, weight-carrying capacity and economy of operation long since earned them to the front, and daily performance based on the quality built into the machines is keeping them there.

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ROBERT H. LUDLOW  
EDITORIAL

# AVIATION

Vol. XIV

FEBRUARY 5, 1932

No. 6

### "Skymirting"

**T**HERE seems to have appeared no commercial aviation another very effective method of using the airplane. "Skymirting" has received prompt recognition as a profitable means of advertising and the aviation has made certain which indicate that this new form of publicity will take its place with aerial photography and mapping in a series of using the airplane as universal work with profit.

Looking around a bit, it is possible to see the sky filled with illustrations of well known commercial articles and the "shapes" of modern advertising displayed in the heavens. The Atlantic City of the future may have its board walk made more interesting by the sky illumination in day as well as by electric lights by night.

The controlling factor of course in all such new adaptations is the commercial results that will follow. Certain disadvantages are apparent. The lack of permanency, the uncertainty of visibility and the number of possible observers are all to be determined. When other forms of publicity are considered, the cost of skymirting does not seem disproportionate. If it can demonstrate that it can sell the public at the rate suggested and billboards have done in the last few years, it is possible that a new branch of commercial aviation will grow into existence that will be an important customer for aircraft and afford pilots another good opportunity.

An interesting experiment is afforded by the possible actual interference of skymirting enterprises and air transport lines. Suppose to express airplane, in following the shortest route to a pilot, has to fly through a "sky ad" and elaborate it—will it have the right to do so? Questions as to rights of way such as these are likely to come up. The Civil Aeronautics Act would have given us very useful in solving controversies of this nature.

### Position Finding by Airplane

**I**N the January issue of The Coast Artillery Journal, Capt George D. Stokes, C.A.C., furnishes a remarkably sound and clear statement of the aerial experiment in a method of long range fire control where subsequent development of supposedly exploded, wherever possible, but that is to maintain the possibilities of coast defense armament.

These tests were undertaken at Fort Story, but Lancaster After giving a detailed account of the various tests, the author draws the following very interesting conclusions:

"To use the work of the airplane observer was nothing short of remarkable. His estimation of direction and speed were remarkably accurate, his locations were very close, and his spotting was uniformly correct. He observed 26 shots

of which he did not lose a single observation. Every shot was reported in the proper direction from the target, and so naturally there were errors in direction, some of these errors was great enough to warrant the battery commander. The observer for all three days was Capt. E. H. Shumaker, A.S., Langley Field. The spotting system was on the main observation battery. The results obtained indicate that they were practical. As a result of this practice I have reached the following conclusions: That air observation is preferable to ground observation when for any reason the ground observation system is unable to function effectively. These reasons may be great range, poor visibility, target obscured from one of the ground stations, or ground observation system out of order from any cause. That airplane control of fire at targets beyond visual range from shore is practicable and that good results can be obtained provided: (1) that there is a suitable two-way radio communication between airplane and battery, (2) that the guns of the battery are in a fairly good condition of fire adjustment, and (3) that the directions are reported with a reasonable degree of accuracy."

The above tests were carried out by what General Patrick calls "air service." It will be interesting to learn the results of a test by "air force" carrying loads to compare with the usual artillery firing from shore. This account will largely explain shore batteries in coast defense is followed by every observer who knows the possibilities of the bombing airplane.

### The Paris Aero Exhibition

**T**HE annual exhibition which was held the last (first) night of December in Paris furnished some interesting indications of the present trend of foreign airplane design.

Perhaps the most striking point illustrated is that the multi-engine type is not making any headway against the single-engine type. American engines are showing in power, around 1000 hp. models being now being produced, and so even in these heavier reliable type are presently fitted into large bombers or commercial carriers which previously were equipped with small auxiliary engines. This seems to bear out the theory that the multi-engine plane—at any rate the outboard engine type—on the result of force majeure rather than of actual necessity. On the other hand the central engine seems to take up too much space to warrant its use as commercial carriers.

In the matter of construction, much advancement is to be noticed in composite wood and metal construction, but nothing very striking appears in all metal construction, at least not striking enough to mark a step forward toward cheap production methods.





# New Aircraft at the Paris Aero Exposition

Review of the Constructional Features and Specifications of the Aircraft Exhibited

The International Aeronautical Exposition which was held in the Grand Palais, in Paris, from Dec. 12 to Jan. 2 last, was from all accounts a remarkable success. The French and the English trade press are agreed that this exhibition showed a much more marked advance in aeronautical engineering than the last previous ones held over the Channel. A great number of novel aircraft were exhibited with a marked tendency toward metal construction. Perhaps the most satisfactory feature of this exposition was the fact that a number of commercial airplanes were actually sold at the show, whereas at previous shows sales were limited to military machines. The sales this time represented commercial passenger carriers for armies as well as small open planes. This is a very which augurs well for the popularization of civil flying, however modest its beginning.

A special article dealing with general impressions of the exposition will be found elsewhere in this issue under the authorship of Mr. M. Raymond Jones, technical editor of *Le Figaro*. In the columns which follow brief descriptions are given of the new aircraft shown for the particular, at which no are indicated by long continuous lines (continuous, *Le Figaro*) and the *Le Figaro*.

## Cancon

The principal exhibit in this class was an improved type of the three-engined transport airplane C30 which had been shown at last year's Salon. This eight-passenger cabin airplane is clearly to be put in service on the Pacific in Western air line.

The lower portion of the fuselage is formed into closed water tight compartments which are sufficient to keep the machine afloat in case of a forced landing on the sea.

Other Cancon exhibits were the C36 and the C38, two motor transport and luxury machines, which are equipped with the 100-hp. 100-hp. 100-hp. Hispano-Suiza engine, and the second a 100-hp. Hispano-Suiza. The C36 was brought out last spring and has been extensively flown since.

The only really new type was two-seat biplane, the C42, a single motor fitted with a 75-hp. Hispano and the C48, a two-seater biplane with engine fitted with a 75-hp. Hispano (the latter characteristic of the new).

All these machines are of all-metal monocoque construction.

## REPRESENTATION OF THE EXHIBITS CANCON

Type	100-hp.	Weight empty, lbs.	100-hp.
Length	100 ft.	Weight empty, lbs.	100-hp.
Wing span	100 ft.	Weight empty, lbs.	100-hp.
Height	100 ft.	Weight empty, lbs.	100-hp.
Wing area	100 sq. ft.	Weight empty, lbs.	100-hp.

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Height	100 ft.	Weight empty, lbs.	100-hp.
Wing area	100 sq. ft.	Weight empty, lbs.	100-hp.

## Avion Paris

The exhibit of this line included the Potez VIII open gear which appeared at the previous show, the Potez XI GAFV machine (descriptive photo), and the Potez XIIII two-seater transport machine.

The Potez XI (Fig. 1) is a two-seater tractor biplane of emergency construction into which metal ribs are a large extent. The main section consists of aluminum backbone and cross members. The vertical portion of the fuselage is built of wooden backbone and cross members, and is covered with plywood, the rear portion consisting of various aluminum backbone and cross members, and is fabric covered. All fittings

are in steel. The wings comprise a number of main ribs of box section and intermediate ribs of plywood built up on box spars. Ribs and ribs are of spruce. Fuselage ribs are also of aluminum backbone. The upper wing is built of three pieces with the center section fixed on a ribbing; the lower wing in two pieces which are attached to the sides of the fuselage. The wings are fabric covered.

The engine is a 100-hp. Hispano-Suiza with Hispano propellers.

## SPECIFICATIONS OF THE POTEZ XI

Type	100-hp.	Weight empty, lbs.	100-hp.
Length	100 ft.	Weight empty, lbs.	100-hp.
Wing span	100 ft.	Weight empty, lbs.	100-hp.
Height	100 ft.	Weight empty, lbs.	100-hp.
Wing area	100 sq. ft.	Weight empty, lbs.	100-hp.

The Potez XIIII commercial transport machine is a three-engine tractor biplane (three 250-hp. Hispano engines) which accommodates twelve passengers in a cabin. The machine is built up in the way of the machine, with the fuselage in the center. Consequently, this machine is very similar to the 75-hp. XI above described. The wings are of box, fabric section, and are of metal spars and ribs. Only one row of intermediate ribs is fitted on each side of the main spar structure. The fuselage part consists of two Vee ribs with a single shock absorber.

## SPECIFICATIONS OF THE POTEZ XIIII

Type	100-hp.	Weight empty, lbs.	100-hp.
Length	100 ft.	Weight empty, lbs.	100-hp.
Wing span	100 ft.	Weight empty, lbs.	100-hp.
Height	100 ft.	Weight empty, lbs.	100-hp.
Wing area	100 sq. ft.	Weight empty, lbs.	100-hp.

## Second Line (Fig. 2)

The Second Line, now known as the Société Industrielle des Véhicules de l'Air, of La Courneuve (France) exhibited a very remarkable single motor machine equipped with a 100-hp. Hispano engine (Fig. 2).

Constructionally this machine, which is entirely built of metal, shows great similarity. It is a single motor machine with the wing at the bottom of the fuselage, and a continuous main spar. The fuselage is of a rectangular section, with rounded corners. The construction is in the form of an inverted T, the deck of the 2-hp. built into the fuselage between the wings, and the base is a beam of metal which carries the wheel axle. The wings are fixed into the side of the fuselage, the upper surface ribs into the fuselage side vertical ribs, respectively.

The fuselage is built on box section backbone (curved) with longitudinal channels (straight). The chassis has a thin edge formed forward, and over the main ribs are several horizontal channels which work into all vertical sections with cross members. The fuselage is built on three sections, built together already at specific factory backbones.

The wings are built on a multiplicity of spars and have a thin edge formed forward. The spars, which are spaced about 5 ft. apart, are the ribs, are formed in the form of a thin sheet formed forward of a single spar, and the spars are coupled together by aluminum strips with internal flanges of steel which they are joined by means of a nut. The two strips on each side of each spar are riveted together through the nut.

The pilot sits somewhat over halfway back along the chord, and is well above the wing. The view for landing will be somewhat obscured, but otherwise the field of vision is excellent.

The engine is simply installed within the fuselage structure but the point of line of the machine will be modified by fitting a fuselage radiator on each side of the top of the fuselage.

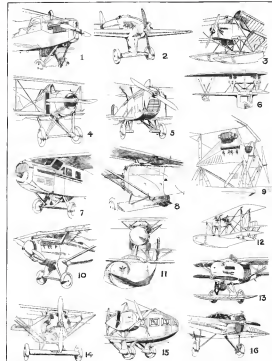


Fig. 1. The Potez XI.

Fig. 2. The Potez XIIII. 3. Potez XI (descriptive photo). 4. Potez XIIII (descriptive photo). 5. Potez XIIII (descriptive photo). 6. Potez XIIII (descriptive photo). 7. Potez XIIII (descriptive photo). 8. Potez XIIII (descriptive photo). 9. Potez XIIII (descriptive photo). 10. Potez XIIII (descriptive photo). 11. Potez XIIII (descriptive photo). 12. Potez XIIII (descriptive photo). 13. Potez XIIII (descriptive photo). 14. Potez XIIII (descriptive photo). 15. Potez XIIII (descriptive photo). 16. Potez XIIII (descriptive photo).













**Marine Corps Outlets—Det. Lt. Col. John G. Channing, det. Marine Barracks, Parris Island, S. C., to Nav. Air Sta. Pensacola, Fla.**

**First Lieut. Andrew W. Hildreth, Walter G. Farrell, and Harold B. Campbell, det. Nav. Air Sta. Pensacola, Fla., to Marine Barracks, Quantico, Va.**

**First Lieut. Harold C. Myers and Sgt. David Christian P. Stahl, det. Marine Barracks, Quantico, Va. to Nav. Air Sta. Pensacola, Fla.**

**First Class of U.S.S. Langley—The U.S.S. Aircraft Carrier Langley, completed her first cruise on Jan. 30, arriving at Pensacola, Fla. from San Francisco via the Hawaiian Islands on Jan. 5, reached San Francisco Jan. 16 and left there this date. When approaching Pensacola her naval gunners took off from her decks and received the Naval Air Station on land aloft at the mother ship.**

**Naval Outlets—Lt. Col. Carl H. Hays and Arthur C. Miles, det. Nav. Air Sta. Pensacola, Fla., to Aircraft Supply Building, Fort.**

**Lt. Donald Boyer (IC), det. Nav. Air Sta. Pensacola, Fla., to the Air Station, D. C.**

**Boys: John H. Roberts, det. Nav. Air Sta. Newport, R. I., to U.S.S. Scudder.**

**Lt. Conde Archibald H. Douglas, det. command P.S.R. Aircraft, to Aircraft Supply, Battle Point.**

**Lt. Col. Charles G. Bellamy, det. U.S.S. Eaglehawk, to Nav. Air Sta. Pensacola, Fla.**

**Lt. Col. Charles A. Ryan, det. H. Barracks, Hampton Roads, Va., to Nav. Air Sta. Pensacola, Fla.**

**Lt. Col. James E. Kile, det. Aircraft Supply Building, Battle Point, to Nav. Air Sta. Pensacola, Fla.**

**Lt. Col. George B. Hoffman, det. U.S.S. Mayflower, to Nav. Air Sta. Pensacola, Fla.**

**Gen. Weyman F. Twiss, det. Naval Air Station, Berlin, Germany, to Det. Nav. Air Sta. Washington, D. C.**

**Det. Lt. Col. John H. Tate, det. U.S.S. Langley, to Nav. Air Sta. Pensacola, Fla.**

**Lt. Col. Harold H. Hays, det. Nav. Air Sta. Aircraft, D. C., to U.S.S. Langley.**

**Lt. Col. Benjamin S. Holman, det. Aircraft Supply Building, Battle Point, to Aircraft Supply, Battle Point.**

**Lt. Col. J. Raymond P. Tyler, det. U.S.S. Wright, to Nav. Air Sta. Lathrop, N. J.**

**Lt. Col. Paul H. Hays, det. Det. Nav. Washington, to U.S.S. Wright, to Langley.**

**Det. Lt. Col. J. Hays, det. U.S.S. Wright, to Nav. Air Sta. Pensacola, Fla.**

**Lt. Col. William E. Hays, det. Det. Nav. Washington, to U.S.S. Wright, to Langley.**

**Lt. Col. Robert F. Hays, det. Det. Nav. Washington, to U.S.S. Wright, to Langley.**

**Lt. Col. Robert F. Hays, det. Det. Nav. Washington, to U.S.S. Wright, to Langley.**

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0.78125 lbs	0.390625 lbs	0.1953125 lbs	\$1.00
0.390625 lbs	0.1953125 lbs	0.09765625 lbs	\$1.00
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0.0244140625 lbs	0.01220703125 lbs	0.006103515625 lbs	\$1.00
0.01220703125 lbs	0.006103515625 lbs	0.0030517578125 lbs	\$1.00
0.006103515625 lbs	0.0030517578125 lbs	0.00152587890625 lbs	\$1.00
0.0030517578125 lbs	0.00152587890625 lbs	0.000762939453125 lbs	\$1.00
0.00152587890625 lbs	0.000762939453125 lbs	0.0003814697265625 lbs	\$1.00
0.000762939453125 lbs	0.0003814697265625 lbs	0.00019073486328125 lbs	\$1.00
0.0003814697265625 lbs	0.00019073486328125 lbs	0.000095367431640625 lbs	\$1.00
0.00019073486328125 lbs	0.000095367431640625 lbs	0.0000476837158203125 lbs	\$1.00
0.000095367431640625 lbs	0.0000476837158203125 lbs	0.00002384185791015625 lbs	\$1.00
0.0000476837158203125 lbs	0.00002384185791015625 lbs	0.000011920928955078125 lbs	\$1.00
0.00002384185791015625 lbs	0.000011920928955078125 lbs	0.0000059604644775390625 lbs	\$1.00
0.000011920928955078125 lbs	0.0000059604644775390625 lbs	0.00000298023223876953125 lbs	\$1.00
0.0000059604644775390625 lbs	0.00000298023223876953125 lbs	0.000001490116119384765625 lbs	\$1.00
0.00000298023223876953125 lbs	0.000001490116119384765625 lbs	0.0000007450580596923828125 lbs	\$1.00
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0.0000000931322574615478515625 lbs	0.00000004656612873077392578125 lbs	0.000000023283064365386962890625 lbs	\$1.00
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0.00000000582076609134674072265625 lbs	0.000000002910383045673370361328125 lbs	0.0000000014551915228366851806640625 lbs	\$1.00
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0.0000000000000000000000206795153138256928052672866229062470083899938201904296875 lbs	0.0000		

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